Zertifiziertes QM-System
DIN EN ISO 9001
Zertifikat-Nr. 01017

Electronic Low Volume Flow Meter

for liquids and gases

measuring • monitoring • analysing

KFF / KFG

Model: KFF-3...

Model: KFF-1...

- Measuring ranges:
  15-100 ml/min ...1-10 l/min water
  25-100 ml/min ...100-500 l/min air
- Measuring accuracy: ± 3% f.s.
- p_{max}: 35 bar; t_{max}: 50 °C
- Viscosity range: low viscosity
- Compression fittings: ⅛"... ½"
- Material: Ryton, brass
- Output: 0-5 V_{DC} or pulses
- No zero drift
- Very sturdy
- Medium: infrared light transmissive

S4

KOBOLD companies worldwide:

AUSTRALIA, AUSTRIA, BELGIUM, BULGARIA, CANADA, CHINA, CZECHIA, FRANCE, GERMANY, GREAT BRITAIN, HUNGARY, INDIA, INDONESIA, ITALY, MALAYSIA, MEXICO, NETHERLANDS, PERU, POLAND, REPUBLIC OF KOREA, RUSSIA, SPAIN, SWITZERLAND, THAILAND, TUNISIA, TURKEY, USA, VIETNAM

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Areas of Application

KOBOLD KFF/KFG flow meters are used for measuring low and smaller, volumetric flow rates of gases (KFG) and liquids (KFF). The media must be transmissive for infrared light.

Series KFF/KFG 1000/3000 flow meters are available in Ryton® and brass, and therefore suitable for many applications in industry, in laboratories, and so forth. The frequency output is optional.

Technical Data

Accuracy:	± 3 % f. s.
Linearity:	± 3 % f. s.
Repeatability:	
KFF:	± 0.2 % f. s.
KFG:	± 1% f. s.
Installation position:	horizontal
Temperature range:	0 ... 50 °C
Temperature drift:	0.2% / °C
Max. pressure:	
KFF:	
Ryton®:	7 bar
Brass:	35 bar
KFG:	2.5 bar
Supply voltage:	12.5 V_{DC} ± 2 V_{DC}
Current consumption:	50 mA (typically)
Output:	
KFF-1../KFG-1..:	
Standard:	0 ... 5 V_{DC}
Option T (KFF-1.. only):	0 ... 5 V_{DC} and frequency output
Max. frequency:	500 Hz
KFF-3../KFG-3..:	0 ... 5 V_{DC}

Material

Version	Ryton®	Brass
Housing	60% Ryton®/ 40% glass	brass/glass
Turbine	60% Ryton®/ 40% glass	60% Ryton®/ 40% glass
Bearings	sapphire	sapphire
Bearing shell	st. steel (316)	st. steel (316)
Gasket	FPM	FPM
Connection	Acetal	brass

Function Principle

The flow meter is based on the Pelton Principle, that is, the flowing medium causes a vane to rotate. The rotary motion is converted to electrical impulses by means of photodiodes. The flow rate is output as a frequency signal or a linear analogue (0 ... 5 V_{DC}).

KFF-1.../KFG-1...

KFF-3.../KFG-3...

No responsibility taken for errors;
subject to change without prior notice.

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Order Details

Model KFF-1.../KFG-1... sensor

Water					Air			
Measuring range [ml/min]	Pressure loss [bar]	Connection	Ryton®	Brass	Measuring range [ml/min]	Pressure loss [mbar]	Connection	Ryton®
15-100	1	⅛"	**KFF-1003**	**KFF-1103**	10-50	100	⅛"	-
50-500	0.7	¼"	**KFF-1005**	**KFF-1105**	25-100	50	⅛"	**KFG-1003**
60-1000	0.5	¼"	**KFF-1006**	**KFF-1106**	40-200	25	⅛"	**KFG-1004**
100-2000	0.5	¼"	**KFF-1007**	**KFF-1107**	100-500	7.5	⅛"	**KFG-1005**
200-5000	0.7	3/8"	**KFF-1008**	**KFF-1108**	200-1000	5	⅛"	**KFG-1006**
1-10 l/min	0.7	3/8"	**KFF-1009**	**KFF-1109**	400-2000	5	¼"	**KFG-1007**
					[l/min]			
					1-5	5	¼"	**KFG-1008**
					2-10	5	¼"	**KFG-1009**
					4-20	5	3/8"	**KFG-1010**
					10-50	5	3/8"	**KFG-1011**
Option T: Frequency output (for KFF-1.. only)					20-100	5	½"	**KFG-1012**
KF-8000: Power pack 120 V_{AC}					40-200	5	½"	**KFG-1013**
KF-8100: Power pack 240 V_{AC}					100-500	7.5	½"	**KFG-1014**

Model KFF-3.../KFG-3... sensor with digital display

Water					Air				
Measuring range [ml/min]	Pressure loss [bar]	Connection	Ryton®	Brass	Measuring range [ml/min]	Pressure loss [mbar]	Connection	Ryton®	Brass
13-100	0.7	⅛"	**KFF-3003**	**KFF-3103**	10-50	100	⅛"	-	-
20-200	0.7	⅛"	**KFF-3004**	**KFF-3104**	20-100	50	⅛"	**KFG-3003**	**KFG-3103**
50-500	0.7	¼"	**KFF-3005**	**KFF-3105**	40-200	25	⅛"	**KFG-3004**	**KFG-3104**
60-1000	0.5	¼"	**KFF-3006**	**KFF-3106**	100-500	7.5	⅛"	**KFG-3005**	**KFG-3105**
100-2000	0.5	¼"	**KFF-3007**	**KFF-3107**	200-1000	7.5	⅛"	**KFG-3006**	**KFG-3106**
200-5000	0.5	3/8"	**KFF-3008**	**KFF-3108**	400-2000	7.5	¼"	**KFG-3007**	**KFG-3107**
					[l/min]				
KF-8000: Power pack 120 V_{AC}					1-5	7.5	¼"	**KFG-3008**	**KFG-3108**
KF-8100: Power pack 240 V_{AC}					2-10	7.5	¼"	**KFG-3009**	-

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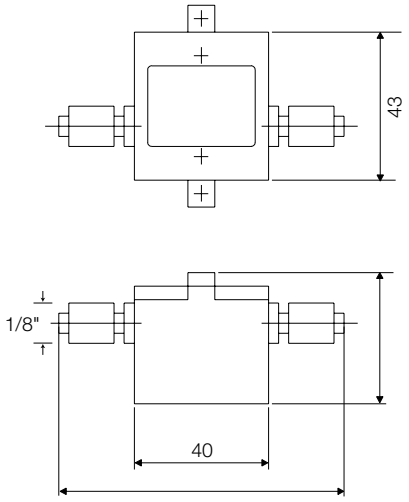
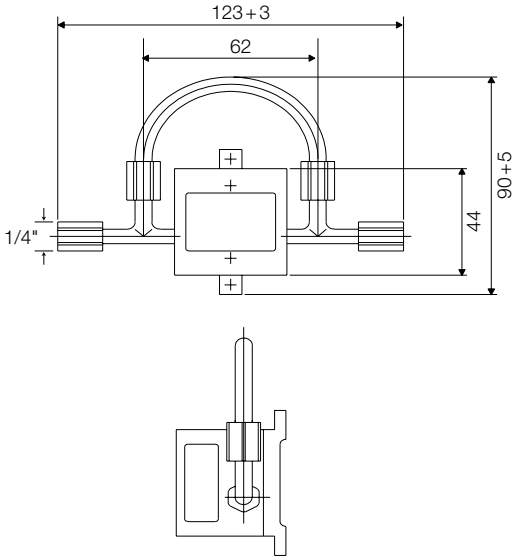
Dimensions [mm]

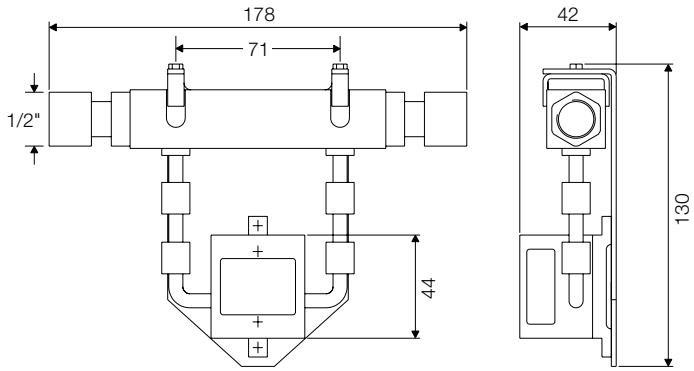
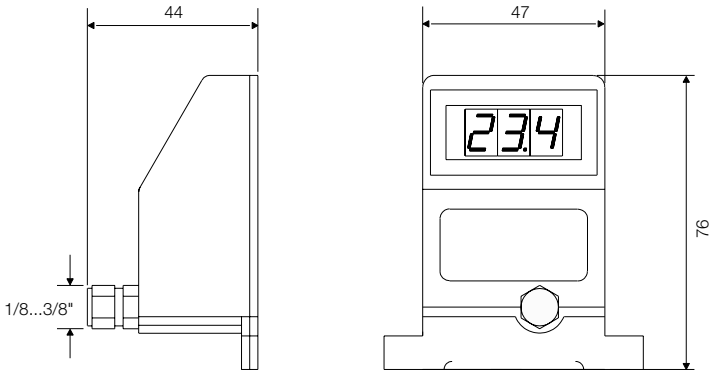
KFF-/KFG-1... ⅛"



KFF-/KFG-1... ¼"



KFF-/KFG-1... ½"



KFF-/KFG-3...